

Message Text

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PAGE 01 TOKYO 10003 01 OF 02 051005Z
ACTION SS-25

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-----054065 051008Z /10

O 050915Z JUL 77

FM AMEMBASSY TOKYO

TO SECSTATE WASHDC IMMEDIATE 9146

INFO USERDA WASHDC IMMEDIATE

USERDA GERMANTOWN MD IMMEDIATE

C O N F I D E N T I A L SECTION 1 OF 2 TOKYO 10003

EXDIS

FOR NYE, T; HOLBROOKE, EA; ERDA FOR SIEVERING

E.O. 11652: GDS

TAGS: PARM, ENRG, TECH, JA

SUBJECT: U.S.-JAPAN JOINT REPROCESSING STUDY: AGREED
ALTERNATIVES AND EVALUATION CRITERIA

1. SUMMARY. FOLLOWING FOUR DAYS OF PLANNING TALKS, AND DETAILED TECHNICAL PRESENTATIONS FROM JAPANESE SIDE, AND COMPREHENSIVE TOURS OF FACILITIES, U.S.-JAPAN JOINT REPROCESSING PLANT STUDY TEAM HAS REACHED AGREEMENT ON DESCRIPTION OF ALTERNATIVE POSSIBLE MODES OF OPERATION OF TAKAI MURA REPROCESSING PLANT AND ON CRITERIA TO BE USED IN CONDUCTING EVALUATION. TEAM NOW PREPARING DETAILED TECHNICAL ANALYSIS LEADING TO JOINT REPORT, USING AGREED ALTERNATIVES AND CRITERIA. TALKS HAVE BEEN CONDUCTED IN SPIRIT OF UTMOST HARMONY, OPENESS, AND COOPERATION, HAMPERED TO SLIGHT EXTENT BY INTENSE PERSISTENCY OF PRESS IN PROBING FOR DAY-TO-DAY PROGRESS REPORTS. TEAM'S ARRIVAL AND DAILY ACTIVITY HAVE RECEIVED DRAMATIC FRONT PAGE COVERAGE IN JAPANESE PRESS. AT REQUEST OF GOJ WE ARE TARGETING FOR COMPLETION OF REPORT BY JULY 11 AND SCHEINMAN AND BENGELSDORF HAVE BEEN EXPLICITLY REQUESTED STAY THROUGH THAT DATE. END
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PAGE 02 TOKYO 10003 01 OF 02 051005Z

SUMMARY.

2. JOINT STUDY TEAM MET IN TOKYO FOR FIRST TIME ON MONDAY, 6/27, WITH ACTIVITIES LIMITED OT CEREMONIAL OPENING STATEMENTS BY BOTH SIDES, TAKING OF PHOTOGRAPHS BY PRESS, AND MAKING ADMINISTRATIVE ARRANGEMENTS FOR SUBSEQUENT STUDY. JOINT PRESS CONFERENCE HELD LATE IN

DAY WAS ATTENDED BY ABOUT 100 MEMBERS OF DOMESTIC AND FOREIGN PRESS CORPS, RESULTING IN ELABORATE COVERAGE IN NEWSPAPERS AND TV NEWS.

3. TEAM MOVED TO TOKAI MURA ON 6/28, UNDER CONTINUOUS PRESS SURVEILLANCE. INTRODUCTORY TOUR OF REPROCESSING PLANT WAS ARRANGED ON ARRIVAL, WITH DOMESTIC PRESS ONLY IN ATTENDANCE. CONTROL ROOM, PART OF CHOP-LEACH EQUIPMENT, AND SPENT FUEL STORAGE POOL WERE VIEWED AT THIS TIME. SECOND JOINT PRESS CONFERENCE WAS HELD AT END OF DAY WITH ONLY JAPANESE REPORTS IN ATTENDANCE.

4. ON JUNE 29 AN OPENING SPEECH WAS GIVEN BY MR. S. KIYONARI, PRESIDENT OF PNC. HE STRESSED THE COMMON OBJECTIVE OF NON-PROLIFERATION, THE ASSOCIATED NEED TO STRENGTHEN IAEA, THE ECONOMIC GROWTH FORECASTS OF THE COUNTRY IN TERMS OF ENERGY REQUIREMENTS, THE PART NUCLEAR - LWRS, HWRS AND FBRS - IS EXPECTED TO PLAY, THE NEED, AS EXPRESSED BY PRIME MINISTER FUKUDA, FOR REPROCESSING SPEND FUEL AND JAPAN'S DESIRE TO AVOID THE PROHIBITION OF THE USE OF PU WITHOUT DUE CONSIDERATION FOR JAPAN'S NATIONAL ENERGY SITUATION. KIYONARI REPEATED HIS WILLINGNESS TO COOPERATE WITH THE U.S. ON IMPROVEMENT OF SAFEGUARDS TECHNOLOGIES AND SYSTEMS AND OTHER DEVELOPMENTAL ASPECTS SUCH AS ALTERNATIVE FUEL CYCLE ANALYSES, BUT SAID THAT IT IS "ESSENTIAL" THAT PU RECYCLE

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PAGE 03 TOKYO 10003 01 OF 02 051005Z

BE EMPLOYED FOR LWRS FROM VIEWPOINT OF EFFECTIVE USE OF NUCLEAR FUELS. FYI: U.S. TEAM LEADER LATER LEARNED FROM STA OFFICIAL THAT STA IS CONCERNED ABOUT PNC MANAGEMENT'S PROCLIVITY TO MAKE PUBLIC STATEMENTS INCONSISTENT WITH GOJ POLICY AND THAT KIYONARI STATEMENT TO GROUP (AND LATER HIGHLIGHTED IN PRESS ACCOUNTS) WAS CASE IN POINT. END FYI.

5. JAPANESE SIDE GAVE EXTENSIVE BRIEFING ON PLANS FOR CONSTRUCTION OF 10 KG/DAY PLUTONIUM NITRATE CONVERSION FACILITY TO BE ADDED TO REPROCESSING PLANT. THIS WAS FOLLOWED BY DETAILED TOUR OF EXISTING MIXED OXIDE FUEL FABRICATION FACILITIES, DURING WHICH EXPLANATIONS WERE GIVEN AND DEMONSTRATIONS MADE OF SAFEGUARDS AND PHYSICAL SECURITY MEASURES IN EFFECT, AS WELL AS OF PROCESSES EMPLOYED. TEAM THEN RETURNED TO REPROCESSING PLANT FOR THOROUGH BRIEFINGS ON AND INSPECTION OF ALL IMPORTANT EQUIPMENT, INCLUDING SOLVENT EXTRACTION CELL, PLUTONIUM STORAGE TANKS, WASTE HANDLING OPERATRBNs, PROCESS AND ANALYTICAL LABORATORIES, AND EFFLUENT MANAGEMENT FACILITIES.

6. THE FOLLOWING SERIES OF OPTIONS WAS AGREED TO BY
BOTH TEAMS:

CASE 0: ORIGINAL DESIGN

CASE 1: BLEND INTO COPRODUCT AFTER SEPARATING PU & U. (PU/U 1:1)

CASE 2: COPROCESS AT 3RD PU CYCLE (PU/U OF 2:1).

CASE 3: BLEND INTO COPRODUCT AT 10 PERCENT PU AFTER SEPARATING
PU & U.

CASE 4: TOTAL COPROCESSING (ELIMINATE F.P.'S) BUT DO
NOT SEPARATE U AND PU).

CASE 5: COPROCESS AT 3RD PU CYCLE BUT DO NOT COMPLETELY
ELIMINATE FISSION PRODUCTS.

CASE 6: TOTAL COPROCESSING (SEE 4) BUT DO NOT COMPLETELY
ELIMINATE F.P.'S.

CONFIDENTIAL

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PAGE 04 TOKYO 10003 01 OF 02 051005Z

CASE 7: COPROCESS ENDING WITH EITHER 1 TO 20 OR 1 TO 3
PU TO U RATION (NO F.P.'S).

CASE 8: COPROCESS ENDING WITH EITHER 1 TO 20 OR 1 TO 3
PU TO U RATION (BUT INCLUDES F.P.'S).

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PAGE 01 TOKYO 10003 02 OF 02 051013Z
ACTION SS-25

INFO OCT-01 ISO-00 SSO-00 /026 W
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TO SECSTATE WASHDC IMMEDIATE 9147

INFO USERDA WASHDC IMMEDIATE

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C O N F I D E N T I A L SECTION 2 OF 2 TOKYO 10003

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CASE 9: PARTIAL PU DECONTAMINATION (DECONTAMINATION
UP TO 3RD PU CYCLE).

CASE 10: SPIKE PU WITH FISSION PRODUCTS OR OTHER RADIONUCLIDES.

CASE 11: ORIGINAL DESIGN BUT RECOMBINE THE FINALE U AND PU. (PU/U 1:100)

CASE 12: ORIGINAL DESIGN BUT APPLY LATEST AVAILABLE U.S. SAFEGUARDS AND SECUIRTY TECHNIQUES.

CASE 13: ORIGINAL DESIGN BUT IRRADIATE FABRICATED FUEL PRIOR TO SHIPMENT.

CASE 14: RESTRICT PU PRODUCTION RATE BY LIMITING FEED TO SOLVENT EXTRACTION STEP.

CASE 15: DEMONSTRATE PLANT WITH FIXED TOTAL INVENTORY (RECYCLE U, PU AND F.P.'S).

7. AN ALTERNATIVE STRATEGY IS TO DEMONSTRATE THE HEAD END PROCESS ONLY UP TO THE ACCOUNTABILITY TANK WHILE OTHER OPTIONS ARE BEING EVALUATED.

8. EACH OF THESE OPTIONS IS BEING ASSESSED AGAINST THE FOLLOWING CRITERIA:

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PAGE 02 TOKYO 10003 02 OF 02 051013Z

A. NON-PROLIFERATION IMPLICATIONS, INCLUDING SAFE-GUARDS AND PHYSICAL PROTECTION.

B. MODIFICATIONS TO EXISTING AND PLANNED FACILITIES.

C. AVAILABILITY OF TECHNOLOGY.

D. R & D REQUIREMENTS.

E. PROBABILITY OF TECHNOLOGICAL SUCCESS.

F. INCREMENTAL COSTS, INCLUDING CAPITAL, OPERATIONAL AND R & D COSTS.

G. TIME DELAY ENTAILED FOR JAPANESE PROGRAM.

H. FUEL MATERIAL ADAPTABILITY TO JAPANESE PROGRAMS.

I. SAFETY, ENVIRONMENTAL, AND REGULATORY IMPLICATIONS.

J. CONTRACT IMPLICATIONS.

K. PERSONNEL IMPLICATIONS.

FROM THE ABOVE, AN OVERALL IMPACT ASSESSMENT WILL BE PREPARED FOR EACH ALTERNATIVE, CONSISTING OF FOLLOWING FACTORS:

A. PACE AND PROGRESS OF JAPANESE REACTOR DEVELOPMENT PROGRAM (ATR AND FBR).

B. FUEL CYCLE ECONOMY.

C. EFFECTS ON NEAR-TERM COMMERCIAL NUCLEAR POWER PROGRAM (LWR).

D. PUBLIC ACCEPTANCE.

E. URANIUM RESOURCES AND/OR ENRICHMENT REQUIREMENTS.

F. IMBALANCE OF MATERIAL FLOW.

9. THE OUTCOME WILL CONSTITUTE A SET OF EVALUATED ALTERNATIVES WHICH WILL PERMIT A REVIEWER TO VISUALIZE THE CONSEQUENCES OF ANY OF THE ABOVE OPTIONS.

10. COMMENTARY: U.S. DELEGATION NOTES ABSOLUTELY TOP

PRIORITY THAT GOJ GIVING TO TOKAI ISSUE. JAPANESE
OFFICIALS HAVE ENDEAVORED TO EXPOSE U.S. SIDE TO WHAT
THEY PERCEIVE AS THE RELEVANT CONSIDERATIONS OF THE
RELATIONSHIP OF TOKAI TO JAPAN'S NEAR AND LONGER TERM
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PAGE 03 TOKYO 10003 02 OF 02 051013Z

NUCLEAR POWER PROGRAM IN THE CONTEXT OF THEIR TOTAL
ENERGY REQUIREMENTS. U.S. DELEGATION HAS RECEIVED
CONSIDERABLE MATERIAL ON JAPANESE PROGRAM: UNRESTRICTED
ACCESS TO FACILITIES AND DOCUMENTATION RELATED TO
TOKAI PLANT; AND FULL COOPERATION OF JAPANESE IN WORK-
ING TOWARD DEFINITION OF ALL THE PRINCIPAL OPTIONS,
BEARING IN MIND PREVIOUSLY AGREED TERMS OF REFERENCE
WHICH CALL FOR EXPLORATION OF SCHEDULED PLANT OPERATION
AND ALTERNATE MODES THAT WOULD AVOID DIRECT ACCESS TO
WEAPONS-USABLE MATERIAL.

JAPANESE HAVE EMPHASIZED VIEW THAT EARLY START-UP OF
TOKAI IS ESSENTIAL TO MAINTENANCE OF TECHNICAL MOMENTUM
OF THEIR PROGRAM, FBR/ATR DEVELOPMENT, AND TO PROVING
OUT PLANT ON A DESIGN BASIS IN ORDER NOT TO JEOPARDIZE
WARRANTIES FROM ST. GOBAIN. WHILE THESE CONCERNS
LARGELY REFLECT THE DIFFICULTIES INHERENT IN CHANGING
THE OPERATIONAL MODE OF TOKAI, THE PACE AND DIRECTION
OF JAPANESE NUCLEAR PROGRAM, AND THE POLITICAL IMPLI-
CATIONS OF BEING PERCEIVED AS SUBMITTING TO U.S.
PRESSURES, THE JAPANESE HAVE BEEN ON THE TECHNICAL SIDE
TOTALLY FORTHCOMING IN WORKING TO IDENTIFY A WIDE RANGE
OF ALTERNATIVES AND TO WORK JOINTLY TO ACHIEVE A COMPRE-
HENSIVE ANALYSIS OF ALL THE IDENTIFIED ALTERNATIVES.
HOW FAR THEY ARE PREPARED TO GO IN ALTERING FACILITY
CANNOT BE JUDGED AT THIS TIME. WHILE OF COURSE PREPARED
AND INTERESTED TO USE TOKAI PLANT AS AN EXPERIMENTAL
FACILITY FOR BOTH GAUGING AND UPGRADING THE EFFECTIVE-
NESS OF SAFEGUARDS, JAPANESE ALSO ARE PREPARED TO FULLY
EXAMINE AND EVALUATE IMPLICATIONS OF ALTERNATIVE MODES
OF OPERATION. NEVERTHELESS THEY CONTINUOUSLY EMPHASIZE
DISTINCT PREFERENCE AND EXPECTATION TO OPERATE, AT LEAST
INITIALLY, IN THE SCHEDULED MANNER. U.S. DELEGATION
REPEATEDLY HAS STRESSED THE FACT-FINDING CHARACTER OF
THIS MISSION AND EMPHASIZED NEED TO ACHIEVE A COMMONLY
AGREED FACTUAL AND ANALYTIC BASE FROM WHICH SENIOR
GOVERNMENTAL OFFICIALS ON EITHER SIDE WOULD BE ABLE TO
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PAGE 04 TOKYO 10003 02 OF 02 051013Z

DRAW IN SEEKING TO REACH A POLITICAL RESOLUTION OF THIS
ISSUE.

MANSFIELD

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Message Attributes

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Capture Date: 01-Jan-1994 12:00:00 am
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Copy: SINGLE
Sent Date: 05-Jul-1977 12:00:00 am
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Decaption Note: 25 YEAR REVIEW
Disposition Action: RELEASED
Disposition Approved on Date:
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